

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086
(For candidates admitted from the academic year 2024 – 2025)

B.Sc. DEGREE EXAMINATION, APRIL 2026
HOME SCIENCE – FOOD SCIENCE AND NUTRITION
SECOND SEMESTER

COURSE : MAJOR – CORE
PAPER : BASICS OF FOOD MICROBIOLOGY
SUBJECT CODE : 24FS/MC/FM24
TIME : 3 HOURS **MAX. MARKS: 100**

| SECTION A | | | | |
|------------------|---|----------------------|-----------|-----------|
| Q. No. | Answer all the questions in 50 words. | (10 x 2 = 20) | CO | KL |
| 1. | What is Food Microbiology? | | 1 | 1 |
| 2. | List two sources of microorganism in foods. | | 1 | 1 |
| 3. | How are cereals and cereal products contaminated? | | 1 | 1 |
| 4. | Name four causes of spoilage of fruits and vegetables. | | 1 | 1 |
| 5. | Define probiotics with an example. | | 1 | 1 |
| 6. | What are single cell proteins? | | 1 | 1 |
| 7. | Differentiate food infections and food intoxication. | | 1 | 1 |
| 8. | Point out two symptoms of Clostridium botulinum poisoning. | | 1 | 1 |
| 9. | Name four microorganisms that cause diseases. | | 1 | 1 |
| 10. | Explain Hurdle concept in food preservation. | | 1 | 1 |
| SECTION B | | | | |
| Q. No. | Answer any TWO of the following with 500 words. | (2 x 10 = 20) | CO | KL |
| 11. | Explain the morphological characteristics of bacteria. | | 2 | 2 |
| 12. | Enumerate on the factors affecting the growth of microorganisms. | | 2 | 2 |
| 13. | Write a detailed account of food poisoning caused by Clostridium species. | | 2 | 2 |
| 14. | Evaluate different tests used to determine the sanitary quality of water. | | 2 | 2 |
| SECTION C | | | | |
| Q. No. | Answer any TWO of the following with 500 words. | (2 x 10 = 20) | CO | KL |
| 15. | Examine the sources of contamination and spoilage of milk and milk products. | | 3 | 3 |
| 16. | Discuss the microorganisms used in the production of alcoholic beverages and bread. | | 3 | 3 |
| 17. | Explain food poisoning caused by Bacillus cereus. | | 3 | 3 |
| 18. | Describe in detail the methods of purification of water. | | 3 | 3 |
| SECTION D | | | | |
| Q. No. | Answer any ONE of the following with 1000 words. | (1 x 20 = 20) | CO | KL |
| 19. | Examine the role of microorganisms in the production of food bio-preservatives. | | 4 | 4 |
| 20. | Describe thermal processing as a method of microbial control. | | 4 | 4 |
| 21. | Elaborate on the morphological characteristics of virus. | | 4 | 4 |
| SECTION E | | | | |
| Q. No. | Answer any ONE of the following with 1000 words. | (1 x 20 = 20) | CO | KL |
| 22. | Describe the causative organism, sources, symptoms, incubation period, and preventive measures for salmonellosis, Shigellosis, cholera and gastroenteritis food infections. | | 5 | 5 |
| 23. | Highlight the use of antimicrobial preservatives, bacteriophages, irradiation and novel food processing technologies in microbial control. | | 5 | 5 |
| 24. | Analyze the microbial fermentation involved in dairy products and vinegar production and pickled foods. | | 5 | 5 |
